

REMARKS

Applicants have carefully considered this Application in connection with the Examiner's Action, and respectfully request reconsideration of this Application in view of the above Amendment and the following remarks.

Applicants have amended Claims 1 – 4 to specify that the carbon nanotubes first have one or more gases absorbed or adsorbed thereto and that the desorption or outgassing of gases involves the previously adsorbed or adsorbed gases. Support for this amendment can be found in the specification at Paragraphs 46 and 75. Paragraph 46 indicates that the “expelled gas is what was previously adsorbed by the carbon nanotubes” and Paragraph 75 notes that the outgassing is of “previously adsorbed materials.” Claims 1-4 have also been amended to delete the reference HiPco and to refer instead to the carbon nanotubes being either single-walled or multi-walled carbon nanotubes having greater than 90% purity. Support for this amendment can be found in cancelled Claims 6-7 and in Paragraphs 13 and 41.

Pending in this application are Claims 1 – 4, 9 – 11, and 39 – 53.

I. Rejections Under 35 U.S.C. §112

Claims 1-4, 6, 7, 9-11 and 39-53 stand rejected under 35 U.S.C. §112 as being indefinite. The Examiner has indicated that the use of the trademark “HiPco” is improper. Applicants have deleted this term from the claims and respectfully request that this rejection be withdrawn.

II. Rejections Under 35 U.S.C. §103(a)

Claims 1-4, 6, 7, 9-11 and 39-53 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002/0183207 to Hjortstam, et al. (“Hjortstam”) in view of U.S. Patent No. 6,423,605 to Sklyarevich et al. (“Sklyarevich”) or U.S. Patent No. 6,203,864 to Zhang et al. (“Zhang”), and further in view of U.S. Patent Publication No. 2002/0068170 to Smalley et al. (“Smalley”). The Examiner asserts that Hjortstam teaches all claim limitations except for subjecting the carbon nanotubes to microwave radiation while in an inert gas chamber or vacuum chamber. The Examiner asserts that Hjortstam inherently teaches the limitations dealing with the effect of the exposure of carbon nanotubes to the microwave radiation, such as “causing light

emission” and “outgassing.” The Examiner has asserted that it would have been obvious in view of Sklyarevich or Zhang to utilize an inert gas chamber or a vacuum chamber for the microwave irradiation of the carbon nanotubes. The Examiner has also cited Smalley as teaching the limitations of the HiPco method. As the HiPco limitations have been deleted from the claims, Applicants respectfully assert that the citation to Smalley is no longer relevant. Furthermore, Applicants respectfully assert that Hjortstam does not inherently teach the subject matter of the claims as amended.

Applicants have amended the claims to require that the one or more gases must first be absorbed by or adsorbed to the carbon nanotubes. Thus, when the carbon nanotubes are exposed to microwave irradiation, it is these previously absorbed or adsorbed gases that are desorbed or outgassed. Paragraphs 46 and 75 of the specification clearly require that the desorption or outgassing be of the previously absorbed or adsorbed gases. This is a significant difference, as the first step of storage of gases on the carbon nanotubes will result in a greater light and energy release when these carbon nanotubes are eventually exposed to microwave irradiation, compared to the light and energy release that occurs when carbon nanotubes having only incidental or minor amounts of gases absorbed or adsorbed thereto are exposed to microwave irradiation.

Hjortstam never teaches the initial step of causing one or more gases to be absorbed by or adsorbed to the carbon nanotubes. Thus, Hjortstam clearly cannot inherently teach that the desorbed or outgassed gases are those that were previously absorbed or adsorbed. Hjortstam fails to teach all of the amended claim limitations of the independent claims.

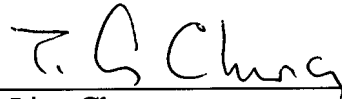
For these reasons, the pending claims are patentable over Hjortstam in view of Sklyarevich or Zhang.

III. Conclusion

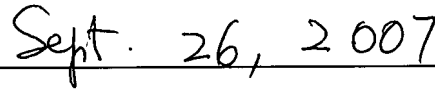
Applicants respectfully submit that, in light of the foregoing comments, Claims 1 – 4, 9 – 11, and 39 – 53 are in condition for allowance. A Notice of Allowance is therefore requested.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,



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Date